

PATENT**Serial No. 10/646,018****Docket No. JSF01-0054D1/WJT08-0005D1****IN THE CLAIMS**

Please amend the claims to read as follows:

1. (Currently Amended) A phase shifter comprising:
 - a substrate;
 - a tunable dielectric film having a dielectric constant between 70 to 600, a tuning range of 20 to 60 %, and a loss tangent between 0.008 to 0.03 at K and Ka bands, the tunable dielectric film being positioned on a surface of the substrate;
 - a coplanar waveguide positioned on a surface of the tunable dielectric film opposite the substrate;
 - an input for coupling a radio frequency signal to the conductive strip;
 - an output for receiving the radio frequency signal from the conductive strip;
 - a connection for applying a control voltage to the tunable dielectric film, wherein the connection for applying a control voltage to the tunable dielectric film comprises:
 - a first electrode position adjacent a first side of said conductive strip to ~~form~~ provide a first gap between the first electrode and the conductive strip; and
 - a second electrode position adjacent a second side of said conductive strip to ~~form~~ provide a second gap between the second electrode and the conductive strip; and
 - a conductive dome electrically connected between the first and second electrodes.
2. (Original) A phase shifter according to claim 1, wherein the high dielectric constant voltage tunable dielectric film comprises a barium strontium titanate composite.
3. (Original) A phase shifter according to claim 1, further comprising:
 - a first impedance matching section of said coplanar waveguide coupled to said

PATENT**Serial No. 10/646,018****Docket No. JSF01-0054D1/WJT08-0005D1**

input; and

a second impedance matching section of said coplanar waveguide coupled to said output.

4. (Original) A phase shifter according to claim 3, wherein the first impedance matching section comprises a first tapered coplanar waveguide section; and

wherein the second impedance matching section comprises a second tapered coplanar waveguide section.

5. (Currently Amended) A phase shifter according to claim 1, further comprising:

a third electrode position adjacent a first side of said first electrode opposite said conductive strip to ~~form~~ provide a third gap between the first electrode and the third electrode; and

a fourth electrode position adjacent a first side of said second electrode opposite said conductive strip to ~~form~~ provide a fourth gap between the second electrode and the fourth electrode.

6. (Currently Amended) A phase shifter according to claim 1, wherein the substrate comprises one of:

MgO, LaAlO₃, sapphire, Al₂O₃, and a ceramic.

7. (Original) A phase shifter according to claim 1, wherein the substrate has a dielectric constant of less than 25.

8. (Original) A phase shifter according to claim 1, wherein the tunable dielectric film has a dielectric constant of greater than 300.